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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/832,708	04/10/2001	Van A. Hunter	82771P226C	2378

8791 7590 04/15/2004

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EXAMINER

MIZRAHI, DIANE D

ART UNIT	PAPER NUMBER
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2175

DATE MAILED: 04/15/2004

9

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

09/832,708

Applicant(s)

HUNTER ET AL.

Examiner

DIANE D. MIZRAHI

Art Unit

2175

Period for Reply
-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-46 is/are pending in the application.
- 4a) Of the above claim(s) 22-30 and 35-40 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 31-34 and 41-46 is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 22-30 and 35-40 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 April 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

DIANE D. MIZRAHI
PRIMARY PATENT EXAMINER
TECHNOLOGY CENTER 2100

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

III. DETAILED ACTION

Claims 1-21, 31-24 and 41-46 are presented for examination.

Claims 22-30 and 35-40 have not been elected. Applicant is reminded to cancel claims 22-30 and 35-40.

Claim Objections

Claim 12 is objected to because of the following informalities: Claim 12 depends on Claim 19. Does Applicant intend for Claim to depend on 9? Appropriate correction is required.

Double Patenting

A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

Claims 1-21 are rejected under 35 U.S.C. 101 as claiming the same invention as that of claim 1-21 of prior U.S. Patent No. 6,223,172 B1. This is a double patenting rejection.

Allowable Subject Matter

Claims 31-34, and 41-46 are allowed over the prior art of record.

The following is a statement of reasons for the indication of allowable subject matter:

Applicant's particular method for forwarding data which includes receiving a search key; producing a masked search key by applying a mask to a portion of the search key starting at a least significant bit of the search key until a least significant bit of the masked search key containing a logic one value; performing a hash function on the masked search key to produce an index; comparing information stored within a bin of a forwarding mechanism, the bin being addressed by the index; determining whether a length of the mask is greater than a predetermined threshold concurrently with performing a hash function on the masked search key to produce an index; comparing information stored within a bin of a forwarding mechanism, the bin being addressed by the index; producing a masked search key by applying a mask to a portion of the search key starting at a least significant bit of the search key until a least significant bit of the masked search key containing a logic one

value; performing a hash function on the masked search key to produce an index; comparing information stored within a bin of a forwarding mechanism, the bin being addressed by the index; determining whether a length of the mask is greater than a predetermined threshold concurrently performing a hash function on the masked search key to produce an index; comparing information stored within a bin of a forwarding mechanism, the bin being addressed by the index for another search iteration if the information does not match the masked search key and the length of the mask is greater than the predetermined threshold in combination with the other limitations of the claims, was not disclosed by, would not have been obvious over, nor would have been fairly suggested by the prior art of record.

The dependent claims, being further limiting to the independent claims, definite and enabled by the Specification are also allowed.

Applicant's particular method locating an entry in a forwarding database corresponding to a longest match of a search key which includes performing a function on the search key to produce a current index; searching a first location in a table identified by the current index for an entry that matches the search key, and if no entry is found that matches the search

key, for each subsequent search iteration performing the following the shortening the search key to exclude data to cause the function to produce a result that differs from the current index, updating the current index with the result, and searching a second location in the table that is identified by the current index in combination with the other limitations of the claims, was not disclosed by, would not have been obvious over, nor would have been fairly suggested by the prior art of record.

The dependent claims, being further limiting to the independent claims, definite and enabled by the Specification are also allowed.

The closest prior art, Griesmer et al. (US Patent No. 5,555,405 Griesmer hereinafter) discloses a forwarding table which is allocated into forwarding entry sets and free space queues. The forwarding table becomes fragmented as forwarding entries are added. A table packing process is triggered by a predetermined trigger to merge small areas of free space into large areas of free space, making consecutive forwarding entry sets contiguous in order to combine small areas of free space into larger ones. The table packing process moves the forwarding entry sets in atomic operations to ensure that forwarding entry

sets remain valid during the moves, thus allowing forwarding decisions to be made based on forwarding information within the forwarding entry set being moved while the forwarding entry set is being moved. The closest prior art fails to anticipate or render Applicant's limitations above obvious.

Prior Art Made of Record

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Conclusion

The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Diane D. Mizrahi whose telephone number is (703) 305-3806. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dov Popovici can be reached on (703) 305-3830. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-9000 for regular communications and (703) 305-9000 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-9001.



Diane Mizrahi
Primary Patent Examiner
Technology Center 2100

April 13, 2004